ADVANCED Management

THE UNIVERSITY OF MICHIGAN
DEC 10 1959
ENGINEERING LIBRARY

DECEMBER 1959

F. W. TAYLOR & AMERICAN MANAGEMENT

By RALPH C. DAVIS

Organizational Health & Executive Development

By CHRIS ARGYRIS

EVERYONE PARTICIPATES IN WORK SIMPLIFICATION

By HERBERT F. GOODWIN

Public Administrator as a Professional Manager

By ROBERT B. CURRY

AUTOMATION: Its Impact on Management

By JOHN A. BEKKER

A CASE STUDY IN MISMANAGEMENT

By JOHN E. BURNS

TO AMERICAN BUSINESSMEN

WHO HAVE OVERSEAS MANAGEMENT PROBLEMS

From 1918 to 1925 I received training in the art of management, under the personal supervision of Clarence Bertrand THOMPSON, who had been F.W. TAYLOR's assistant from 1910 to 1915.

Our organization has 80 management engineers. We have made 17 study tours inside the United States, each tour lasting from one to nine months.

As of January lst 1959, the total amount of experience of our consulting group in the field of scientific management had reached 861 man-years.

This clearly shows that our experience backed up by an advanced training program enables us to handle management problems IN THE AMERICAN WAY BUT WITH A FRENCH LOCAL ANGLE.

On request we would be glad to send you a list of references in France, Europe, Africa and Asia.

ORGANISATION PAUL PLANUS

233, Fbg St-Honoré, PARIS (8e) - WAG. 78-63 - France

For better employee relations, use the

Suggestion Plan Guide

by The Reading Chapter, S.A.M.
Research Committee

The basic framework of objectives, policies, procedures and controls most successfully used by business organizations in their installation and conduct of the suggestion system for employees.

$1.50 per copy

Order from:

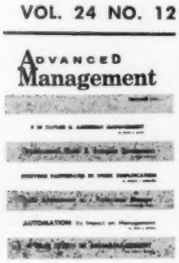
SOCIETY FOR ADVANCEMENT OF MANAGEMENT
74 Fifth Avenue, New York 11, N. Y.

VOL. 24 NO. 12

DECEMBER, 1959

ADVANCED Management

Progress Through Enlightened Management



"Through research, discussion, publications and other appropriate means, to conduct and promote scientific study of the principles governing organized effort in industrial and economic life . . . for the general betterment of society . . ." SAM CONSTITUTION.

Editorial Consultant
VINCENT A. FLYNN
Publications Manager
FRANCIS A. MCNEIRNEY
Business Manager
PATRICK J. REDDINGTON
Circulation Manager
MARION CUSICK

Editorial Advisory Board

JAMES J. BAMBRICK
Asst. Director, Industrial Relations
Standard Oil (Ohio)

JOHN M. BARNES
Manager, Personnel Relations
Champion Paper & Fiber Co.

SAMUEL L. H. BURK, *Partner*
Rogers, Hill & Slade, Consultants

PHIL CARROLL, *Professional Engineer*
Chairman of the Board, SAM

EDWARD D. KEMBLE, *Manager*
Manager Research Service
General Electric Co.

MATTHEW J. MURPHY, *Vice President*
Smyth & Murphy Associates, Inc.

AL N. SEARES, *Ret. Vice President*
Remington Rand Division
Sperry-Rand Corp.

ORDWAY TEAD, *Vice President*
Harper & Bros.

L. T. WHITE, *Vice President*
Cities Service Petroleum, Inc.

ADVANCED MANAGEMENT, published monthly by the Society for the Advancement of Management, Inc., 74 Fifth Avenue, New York 11, N. Y., as successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Reentered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1959, Society for Advancement of Management. Permission must be obtained for reprinting, digesting, or quotation. U. S. and Canada Subscription rates: $8.00 per year. Foreign Subscriptions: $9. Single copies: 75 cents (members); $1.00 (nonmembers). All members receive this publication, for which $4.00 of their dues is allocated. Reprints of articles readily available in quantity, price schedule on request. An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in Industrial Arts Index, available at Public Libraries. Notification of address changes must be given four weeks in advance. The editors will be pleased to review manuscripts submitted for publication, but will not be responsible for loss in transit, safe custody or otherwise. DISCLAIMER: The views of the authors are not necessarily those of the Society for Advancement of Management, S.A.M will not be responsible for any liability that might develop as a result of articles published in this magazine. *The following items are registered trademarks owned by the Society for Advancement of Management, Incorporated:* ADVANCED MANAGEMENT, S.A.M, *and the seal above.*

CONTENTS

Frederick W. Taylor and the American Philosophy of Management ..... by RALPH C. DAVIS 4

Organizational Health and Executive Development ..... by CHRIS ARGYRIS 8

Everyone Participates in Work Simplification ..... by HERBERT F. GOODWIN 12

The Public Administrator As a Professional Manager ..... by ROBERT B. CURRY 16

Automation: Its Impact on Management ..... by JOHN A. BEKKER 20

Human Relations in Action: A Case Study in Mismanagement ..... by JOHN E. BURNS 25

S.A.M. News and Notes 28

The following article is an address given by Professor Davis upon receiving the 1959 Taylor Key Award of the Society for Advancement of Management. Presentation of the Award was made at the Society's Annual Fall Conference, October 29, 1959.

Frederick W. Taylor and the American Philosophy of Management

By RALPH CURRIER DAVIS

IT is appropriate, at this time, to review the impact of Frederick W. Taylor's philosophy on the development of a science of management.

The basis of our American management philosophy was laid by Taylor, and his associates. Some of the best evidence of this is to be found in Taylor's testimony, given in January, 1912, before a Special House Committee of Congress for the Investigation of the Taylor System. In it, Mr. Taylor restated the fundamental nature of his principles of scientific management. One example should suffice: The Committee's line of inquiry, at one point in the testimony, was directed toward a clarification of the significance of the so-called "Taylor System". Mr. Taylor's reply to the following question indicates his recognition of the Doctrine of the Primary Service objective:

"The Chairman: Is it not the purpose of all production to add to the comfort and well-being of mankind?

"Mr. Taylor: It is."[1]

Taylor's categorical agreement with the Chairman's statement reflected his belief in the misison of scientific management to contribute constructively to the economic and social betterment of our society. Taylor and his associates emphasized in their writings the responsibility of business leaders to support and promote the public interest, in return for the rights of private property, private capitalism and private profit. This theme of the primary service objective of the business organization — a service to society through the provision of customer satisfactions — appears and reappears in the literature of management during the early decades of the twentieth century, from 1900 to 1930.[2] The distinction between the primary service objective of the business organization and the principal objective of the business man — a dividend or profit-share — was recognized, but not as clearly as in later decades.

Taylor had stated previously his definitions of scientific management. He repeated them to aid the Committee in understanding the basic nature of his philosophy. It will be recalled that he stated first what scientific management is not:

"Scientific management is not any efficiency device— It is not a new system of figuring costs; — it is not a piece-work system; — it is no scheme for paying men; it is not holding a stop watch on a man and writing things down about him; it is not time study; it is not motion study; — it is not printing and ruling and unloading a ton or two of blanks on a set of men —; it is not functional foremanship; it is not any of the devices which the average man calls to mind when scientific management is spoken of."[3]

The Committee was still having some difficulty in grasping the significance of scientific management, evidently, despite Taylor's detailed statement of what it was not. In consequence, he stated later what it is, in response to a question from a committee member. In so doing, he indicated clearly that scientific management is a basic philosophy of executive leadership in an industrial society:

"Mr. Redfield, (a committee member): Is not scientific management largely a state of mind?

"Mr. Taylor: The essence of it is this new state of mind".[4]

The purposes of any philosophy are to provide 1) a basis for determining the relations between cause and effect, as they enter into the solution of certain problems within the field of some particular phenomena, 2) a scale of values by supplying criteria of what is desirable or undesirable, proper or improper, sound or unsound, right or wrong, and in consequence, 3) a basis for effective thinking for the solution of the particular kinds of problems.

A state of mind is some mental condition that governs our attitudes toward certain problem situations. It controls our thinking concerning them. A state of mind may be created by the acceptance or rejection of a particular philosophy. When Mr. Taylor agreed with Mr. Redfield, that scientific management is a state of mind, he was saying that

[1] Frederick Winslow Taylor — "Scientific Management", P. 211 of "Testimony", Harper & Bros., 1947. The Chairman attempted, subsequently, to narrow the meaning of the term "mankind" to industrial operative employees, and to draw out an admission that the "discomfort" of mankind", which might result from the managerial decisions required under scientific management, would destroy "the very purposes of your production". Mr. Taylor pointed out in subsequent testimony that these decisions are based on "the laws and the formulas and the facts of scientific management", that have been developed as a result of experience, research and study; that these decisions are based on the law of the situation and accordingly are not arbitrary.

[2] The concept of the primary service objective of the business organization antedates the era of Frederick W. Taylor, of course. An elementary statement of it was made by Charles Babbage in 1832, in his book "On the Economy of Machinery and Manufactures".

[3] Ibid., P. 26 of "Testimony".

[4] Ibid., P. 250 of "Testimony". Mr. Taylor went on to say that; "The very essence of it involves this new and complete mental revolution as to the duty of both sides, one toward the other; the substitution of the attitude of peace for the attitude of war. There is no question about that." (Taylor had referred previously to the need for a division of managerial and operative work, and for a change in the attitudes of Capital and Labor toward one another.)

scientific management is a philosophy that supplies a basis for effective thinking in the solution of management problems. A valid science in any field must have a sound philosophy on which it can base its tenets.[5]

There has been a marked increase of interest in the problem of management philosophy, since 1945, among business executives as well as management educators. An increase of interest in any problem is usually the result of some recognition of difficulties that endanger our personal interests, directly or indirectly. Some of the difficulties, that have excited this interest in management philosophy, are fundamental. For example, management is the work of executive leadership anywhere. Its successful performance requires employee and public support. Business executives need this support badly. They can not hope to get it unless they have a sound, logical, well-formulated philosophy of management that is known, understood and accepted by employees and the public. Acceptance depends on agreement that the particular management philosophy is not antagonistic basically to the short-term personal interests of a majority of employees and citizens, and is in consonance with the long-term interests of the general public.

There are many fundamental reasons why such a philosophy is necessary for executive effectiveness: A sound basis for thought and action is a requisite for success in planning, organizing and controlling the work of an organization. It is a requisite for confidence in business leadership, and therefore for sound business relations of all kinds. It is a requisite for that vision and imagination which is necessary for success in these days of international competition. There are other fundamental reasons.

There are also many current business, political and social problems that account for the increased interest of business executives and management educators in management philosophy. These problems are aggravated or caused by conflicts of viewpoints and attitudes concerning what are proper approaches to their solution. The difficulties causing these problems may have their genesis in faulty decisions that are based on an inadequate philosophy of management, or none at all. Their decisions may be made or influenced by business, governmental, educational, or other leaders. These resulting difficulties may be grouped in three categories, for the purpose of this discussion; (1) internal management difficulties of the business organization, (2) external difficulties affecting the business organization, and (3) general difficulties affecting directly the public interest.

These problems may have short-term, intermediate or long-term effects on the business organization, the economy, or both.

[5] Taylor was a practical man. He recognized that any workable management philosophy must be based on the concept of intelligent selfishness. He insisted, for example, that "philanthropy has no part in any scheme of management. — scientific management is no scheme for giving people something they do not earn". — Ibid., P. 64. He would not have objected to modern plans for paying "fringe benefits", provided that the payments were at least matched by corresponding increases in productivity. He would have objected probably to any progressive weakening of individual responsibility for one's welfare. He was opposed violently to any form of "featherbedding".

Ralph C. Davis is Professor of Management and Head of the Management Division at Ohio State University

Internal management difficulties may be defined as those for which the executive leadership of a business organization should be able to develop and apply satisfactory solutions, despite the intervention of some external influences. An example is the failure of some companies to maintain a competitive rate of growth, or a competitive rate of profits, or both. An obvious cause may be faulty decision-making for certain long-range problems having to do with quality competition. The management of these companies may be unaware of the relation of this problem to the "doctrine of the primary service objective", despite the fact that it is more than 125 years old.

Another internal problem is the inability of some companies to decentralize effectively with business growth, resulting in increasing operational ineffectiveness. Managerial decentralization requires delegation. An executive may delegate, but he may not abdicate and stay on the payroll. This sets up a number of conditions and requirements for sound, successful delegation. One must suffice for the purposes of our discussion: Before an executive assigns duties to a subordinate, and extends to this subordinate corresponding responsibilities and authorities, he should assure himself that the subordinate will probably make decisions, in his assigned area, of the same kind and quality that the delegating executive would make himself. The successful executive does not insist, expect, or desire that his subordinates make the same decisions that he would make himself.

Successful delegation requires then the indoctrination of subordinate executives and operatives with a sound management philosophy, but only to the point that will assure uniform thought and action in the solution of the managerial and operative problems of the business organization. This degree of indoctrination is necessary to assure that initiative, voluntary cooperation and cross-coordination which are required for competitive success in a free-enterprise economy. If complete indoctrination were possible, it would tend to result in uniformity, rather than unity of thought and action. Such a development could be fatal to the economic life of the business organization, even in the short-run. Complete indoctrination is not possible, so long as we retain our constitutional rights of freedom of thought, press and speech. Some "gray-flannel-suit" behavorial scientists have suggested in their writings that there is a doctrine of conformity of thought in the management of business organizations. There must be such a doctrine,

as indicated above, but it requires conformity only in that minimum degree which is necessary for effective, voluntary cooperation and cross-coordination.

The over-emphasis that such writers have placed on this "doctrine of conformity" suggests that they may lack sufficient familiarity with, or understanding of, the philosophy of modern management. This over-emphasis on the operative or executive employer, "as a person", tends to underemphasize the fact that the employer also is a member of an organization, for hire. He has an obligation, as such, to support his executive leadership, accept managerial direction for the accomplishment of the organization's service objectives, and cooperate willingly with his associates.

Some companies have difficulty in reducing operating expenses because of employee opposition to certain cost-reduction programs. It is obvious that some conflicts of personal and organizational interests are involved. This opposition may result, in part, from a lack of confidence in the fairness of company executives or their ability to make the necessary adjustments with a minimum of injury to the personal interests of employees. Good organizational morale depends on confidence in executive leadership and its ability to accomplish an integration of interests. A common scale of values is one of the important requisites for an integration of interests.

It has been noted above that both executive support and a common scale of values depend on the understanding and acceptance of the organization's management philosophy by its rank and file. So again, it is evident that this problem of opposition to cost-reduction or other management programs may be caused substantially by a failure to develop or apply successfully a sound philosophy of management. Such internal problems remind one, however, of the old recipe for Welsh rarebit, which reads in part; "First, catch your rabbit". Some companies have no management philosophy to apply.

External business difficulties are those for which the executive leadership of a business organization may be able to develop some satisfactory solutions, but the application of these solutions may be conditioned substantially by external forces that are beyond the control of the company's management. Successful solutions may require the cooperation of companies within the particular industry, and governmental agencies as well.

Business leadership frequently requires public support, as well as the support of the members of the particular organization. Business executives have been chagrined, frequently, by their inability to exercise effective public leadership in matters having to do with strengthening and improving the economy. There is little doubt that the average citizen admires the managerial and technical abilities of the American executive. The current situation suggests, however, some lack of public confidence in the economic and social purposes of business executives. Either the average citizen is not familiar with the management philosophy of the American executive, or he does not accept it, or he does not believe that the executive has any sincere intent to be governed by it in his conduct of business affairs. This doubting attitude is reflected in the climate of public opinion concerning "Management's right to manage". It has resulted in increasing encroachment on this right by governmental agencies and union organizations. An unrestricted exercise of the right to manage would result probably in the managerial abuses that caused the restrictions in the first place. On the other hand, there are necessary rights of decision and command that the business executive must have, to enable him to exercise effective leadership in the business organization and in the economy. The business executive needs the support of the public in re-establishing or preserving these management rights.

There are many general economic difficulties that affect the public interest directly, as a result of the operations of our "free enterprise" system. There has been a notable failure, for example, to get the active support of certain so-called "uncommitted nations" for the American system of private capitalism. Yet we have spent many millions of dollars in promoting its acceptance. It is possible that this failure should have been anticipated. The scales of values that are set up by the management philosophy underlying a free enterprise system, are opposed in part to the values that are important in the philosophy of life of some of these "uncommitted" peoples. They are not ready yet for any system of economic decentralism. They never will be, in some cases, so long as their present rulers can apply effectively various means for thought control. In any event, one can not buy loyalty. It is something that is given. It depends on a voluntary integration of interests. Another general problem is the flight of American capital abroad, and the increase in the amount of foreign goods that are being sold in American markets. These and other business and economic problems depend on or are affected by the more fundamental problem of an evolving American management philosophy.

No philosophy can be more effective than its application. The forces and effects that condition the application of a given policy on the floor of a store, a bank, or a factory, may have their genesis in some very fundamental concepts. The chain of influences and events may become very strained and distorted, as we pass downward from;

The Constitution of the United States,[6] to
The current climate of public opinion, to
National and state legislation,[6] to
Governmental regulation of business operations, to
A general philosophy of business management, to
Industry codes of management,[6] to
Divisional, plant and departmental policy statements to
Operative methods and procedures, to the
Performance of the day's work by employees.

No body of doctrine can be applied in contravention of the Constitution of the United States by any group or association of citizens, or by individuals. The Constitution establishes certain basic objectives and fundamental principles that are intended to safeguard individual liberties and the institutions of a free economy. The Constitution can be amended, of course, but not easily and hastily. It can be done only when there is a strong, continuing demand for some change in our basis of government, to permit the

development of a more fundamental solution for some basic problem.

The current climate of public opinion is important, nevertheless, since it may be reflected in current national and state legislation. A relatively mild labor-union control bill was passed by Congress during the Summer of 1959. It was much stronger, however, than any bill that had been anticipated by professional labor leaders, because many congressmen were deluged with letters and telegrams from individual citizens who had been aroused by the congressional investigations of corruption in labor unions.

It is obvious that a general philosophy of business management must be in consonance with existing legislation and the current climate of public opinion. No official statement of such a general philosophy exists, of course. Such a philosophy exists, however, but it is still in the process of evolution. The Society for Advancement of Management ran a series of statements of management philosophy during 1958 and 1959. Some nationally-known business leaders have published statements of their personal management philosophies, under various titles. Some management educators, including the undersigned, have attempted to set down, in their writings, what they believe to be the basic tenets of a sound management philosophy in a free-enterprise economy. Many other evidences of an evolving management philosophy can be found. The experts do not agree, as usual, concerning what these tenets are or should be. There is nevertheless, a common thread of objectives, principles and reasoning that links all of them together.

If this general philosophy of management were known, understood, accepted and supported by the general public, it would have a powerful impact on legislation and corporate policy governing business conduct and business relations.[7] Some such public understanding also appears to be developing. It appears to be exercising some influence on the management codes of those industries that have codes, through the instrumentality of the congressional investigation, in some instances. The principal objective of the development of such codes has been, in some cases, the limitation of competition, up to some point that might invite the attentions of the Federal Trade Commission and the Department of Justice. Some assurance that the operations of the particular industry will be in consonance with the public interest appears to have been a secondary consideration. There appears also to be a very limited carry-over from the industry code to the statements of general corporate policy of the principal companies within an industry. A comparison of such corporate statements will show immediately some wide differences of emphasis on different objectives and basic management principles, between these companies.

It should be noted again that uniformity of thought and action between or within companies is not in the public or the corporate interest, in the long run. Uniform approaches to common problems, based on common objectives and principles, most definitely are, nevertheless. Any divisional, plant, or departmental policies should be in harmony with general corporate policies. They are usually. When they are not, or they are mis-applied, it may be due to poor headquarters staff work, or the failure of top management to indoctrinate subordinate executives with the meanings and significances of corporate policies.

Both organizational relationships and business procedures are developed as a result of managerial decisions. The quality of these decisions depends on the philosophy of the particular management. It is a long way from the Constitution of the United States, through corporate general offices, to the floor of the factory, store or office where salable values are produced. There should be little wonder that many fine ideas become lost, distorted or mis-applied along the way.

We are approaching the time of the year when our economic soothsayers begin to forecast business in the 1960's.

This writer would like to suggest that the major problem will be public education in the management philosophy of private capitalism. The preservation and continued development of the free enterprise system may well depend on the successful accomplishment of this mission. This Society is dedicated to the further development of scientific management in the spirit of Frederick W. Taylor. It has an obligation, accordingly, to continue its participation in the accomplishment of this educational mission by further contributions to the development of American management philosophy. ■

---

[6] Since this address was given on October 29, 1959, the following events have been chronicled in a single issue of the Columbus Sunday Dispatch of November 8, 1959: (a) An editorial entitled "Public Rights Upheld by Strike Injunction" commented favorably on the action of the U.S. Supreme Court in upholding the constitutionality of the Taft-Hartley strike injunction provisions, (b) a news dispatch reported that Senator Smathers of Florida had proposed a supreme court for labor-management relations "whose findings and judgments would be final and binding on both parties — a court of last resort in the field.", (c) a news dispatch reported that union victories in government supervised representation elections had fallen to a near-record low in the third quarter of 1959. "The Senate Rackets Committee's widely-publicized hearings into union corruption and abuses apparently were a factor in the setbacks", (d) a news report summarized the hearings of a congressional committee that is investigating the policies and practices of the television broadcasting industry, and (e) a news dispatch reported a statement by the president of the National Association of Broadcasters that an amendment of the television industry's self-regulatory code, to prohibit "any abuse of public trust and confidence" will be proposed at a meeting of the television code review board in Los Angeles on Nov. 16. It was stated that the proposal is the outgrowth of disclosures by a House committee investigation of the rigging of quiz shows.

[7] At the time when this paper is being written, thousands of business executives are attending conference discussion programs on the general problem of effective political action. These conferences are being held in hundreds of chambers of commerce throughout the United States. Business executives are being trained and urged to participate actively in the work of the "political party of their choice". The objectives of such participation include the prevention of the development of some highly-socialistic form of government, and the preservation of private capitalism and the free-enterprise system in the United States. This increased political participation of executives probably will be beneficial. This author believes, however, in President Lincoln's dictum concerning the inability of any leadership to fool all of the people all of the time. The successful solicitation of voter support depends on the confidence of the average citizen in the purposes of the solicitor. It would be interesting to know how many of these participating executives can state *any* sound, logical management philosophy that is in consonance with the public interest.

Organizational Health and Executive Development

By CHRIS ARGYRIS

TOP LINE EXECUTIVES continuously admit that the most perplexing problems that they face are human ones. For example, Nickerson[1] states that in a survey of 76 large corporations nearly 90 percent of executive *dismissals* were due to lack of wisdom and skill in leading people. Similarly, Newman and Logan[2] and Ginzberg[3], each summarizing the discussions of two top management groups, respectively conclude that the relationships with people are the most difficult that confront present-day management. As a result, top management want their subordinates to develop human skills in dealing with human relationships. When asked precisely what new kinds of behavior they want to see the executives develop, many reply that they are not sure. When pushed for some reply they typically respond as follows:

> I don't know what skills they should have; that's why we've asked you to meet with us. I *do* know that years ago it was the improvement of technology that provided the most pay-off for the least investments. Today my competitors can afford any new machine, new talent, new system that we can afford. The real pay-off in the future lies in the way people use the machines, leadership and systems that we acquire. This depends on the attitudes employees hold about the company. It seems to me it's top management's job to build up the employees' loyalty toward and interest in the company. High employee morale is crucial. We need employees who will cooperate willingly and spontaneously in the company's interest which by the way is in their own interest. This is the leadership challenge of the future.

Emphasis on Symptoms Rather Than Organizational Processes

In the quotation above the president is focusing on *end products* such as loyalty, high morale, interest in the company, cooperative employees, etc. The difficulty with these symptoms of health become evident in a recent study conducted in a plant which exhibited all these characteristics to a marked degree. Nevertheless, the employees also showed a high degree of apathy, lack of involvement in the corporation, and an overemphasis on money and other material factors.[4] In fact the data lead to the conclusion that the employees' high loyalty and high productivity are partially caused by the fact that they are permitted to be noninvolved and experience few contacts with management.

Executive Development Is Influenced By The Total Organization

But assume, for the moment, that these end products are valid indicators of organization health. According to existing research these end products are never due simply to the behavior of the executives. These end products are resultants of the *total organization*. In fact, in many cases the leadership may have little influence over them.

The organizational structure, the managerial controls, and what I have called pseudo-human relations programs greatly influence the extent to which these end results will exist in an organization. Thus a change in the make-up of a job,[5] where not only a total product is made by each employee but where he is made responsible for its inspection; a decrease in the degree of formal authority held by management; a re-alignment of assignments; a modification of decision-making policies to permit greater participation (and concomitant responsibility) can all do much to achieve the end results listed above by management. Similarly, a re-organization of the budget system, so that the line people at each level have greater control; greater participation in the formation of production controls; greater freedom in production planning, greater opportunity to control (and be responsible for) inventories; all of these create an

[1] Nickerson, Albert J., "Climbing the Management Ladder," *Saturday Review*, Nov. 21, 1953, p. 38.

[2] Newman, W. H. and Logan, James P., *Management of Expanding Enterprises*, New York, Columbia University Press, 1955, p. 45.

[3] Ginzberg, E., *What Makes an Executive*, New York, Columbia University Press, 1955.

[4] Argyris, Chris, "The Organization: What Makes It Healthy," *Harvard Business Review*, Nov.-Dec., 1958, pp. 107-116; and "The Individual and the Organization: An Empirical Test," *Administrative Science Quarterly*, vol. 4, no. 2, September, 1959, pp. 146-167.

[5] Marks, Richard, *Man, His Work and the Organization*, mimeographed, Dept. of Industrial Administration, Yale University, Spring, 1958.

Dr. Argyris is Associate Professor of Industrial Administration at Yale University

organizational milieu within which dramatic changes will tend to occur in employee attitudes toward the company. *Less* emphasis on communication schemes, participation gimmicks (where management fundamentally is in control), and merit ratings can help the executive to experience a world where he is truly responsible for his own development.[6]

In short, since the *total organization* (the structure, the policies, and practices, the design of the jobs, the managerial controls, etc.) influence growth, the total organization should be modified if true development is to occur in individuals and in the organization.

Note: I am *not* saying that training in leadership and other human skills in not important. Nor am I saying that "outside" executive development programs are not useful. I am primarily interested, in emphasizing the importance of the organization in developing executives. I *am* suggesting that it is equally important for management to look at its philosophy, organization structure, managerial controls and pseudo-human relations.

Importance of Organizational Health

The implication is that management should consider shifting its emphasis and philosophy from executive development *per se* toward the development of the total organization; more accurately toward the *process of increasing the healthy development of the total organization.* Such a philosophy will assume that the organization is a living entity with a right to health. It is time, it seems to me, that organizations, *any* organization, that are considered legitimate in our society be invested with the value that they have a right to health. Only then can a realistic philosophy of management be developed. If one does not deeply respect the health of an organization, one will always be hesitant in developing a philosophy (and practice) to optimize organizational health.

The emphasis on organizational health will not harm individual initiative. As I interpret the research, it is a sick organization that creates and rewards "organization man." A healthy organization will naturally emphasize individuality.

If men make organizations and if they become "organization men," this mirrors the kind of men within the organization and not necessarily the inherent "badness" in the organization.[7] It is the healthy, mature individual who knows how to give of himself without feeling or becoming dominated by the organization. It is the immature person who believes that giving of one's self is to give up one's self. Similarly, a healthy individual is not defensive about his organizational power nor does he use it in arbitrary ways. It is an immature individual who feels defensive about the power and who will either abdicate it or overuse it.

Does Executive Development Lead to Organizational Health?

Placing the central emphasis on a healthy organization raises several important but infrequently considered questions about executive development programs at universities, management associations, etc. For example, many executives state that they send people to these programs to "unfreeze" them; to expose them to new points of view, etc. This implies that the internal organization as it is presently constituted freezes people. If this is true, why not build a "defroster" system *within,* and as an integral part of, the organization? Already many examples can be cited of managers sending executives to university executive programs with the hope of eventually bringing new blood and life to the organization. Thinking in terms of organizational health, such a policy is similar to a medical doctor keeping a sick person alive by blood transfusions. If the individual is to be called healthy, he eventually must create

For detailed evidence to support these views, see my *Personality and Organization*, Harper and Bros., 1957.

[7] Some dependencies are healthy. Healthy dependencies are those that permit us to really be ourselves. We do not depend on others to tell us what to do; rather we utilize others in such a way that we can grow *and* the other individuals can also grow if they wish.

his own new blood. Does not this make sense for the organization? Does it not need to create a climate from *within* to breathe a new life into its make-up?

Another possibility is that outside programs that are successful may have a tendency to rigidify the existing top management leadership patterns. I have attended a number of company executive development programs in large corporations where primarily younger top management are "invited" to attend. The rationale (and it may make sense) is that a man 55 and over is least trainable and has few years left. Consequently the investment in his training will not tend to pay off. Thus the upper layers (who are usually the older people) are immediately excluded from the programs. One of these older individuals illustrates the problem when he said, "Well, as the company implies, our days are numbered. We old ones have to give way for new blood." True their days may be numbered. But there are many cases on record where an "old timer" in one year (no less five years) has successfully undone much of what a subordinate thought he learned from a good person.

Executive development programs may also provide top management with a rationalization *not* to look at their own impact on their subordinates and the organization. Some top management send an executive to a school because they feel they cannot develop him within the organization. This is his last chance (or next to last chance if they are "kind" enough to send him to two schools). If he does not change they rationalize to themselves, "We're right. We have spent thousands on Dick and he hasn't developed a bit. I guess we better set him out to pasture." In many cases, however, it may not be Dick's fault. He may live in an organizational milieu in which he can not grow and develop even if he desires. But, even if management is correct, isn't there something wrong about sending a man to an executive development program to have a rational reason for setting him aside? Doesn't the solution of this kind of problem deserve the dignity of relationship where both sides discuss the problem thoroughly? Who really needs development in this case, the subordinate or the top management?

Less dangerous but more plentiful are the number of requests that directors of university programs receive to "polish" a particular candidate in a particular management activity (usually his interpersonal competence). Again, if one focuses on a healthy organization, ought not this be directly dealt with by the top management and that particular individual within the company context?

Installing The Processes Toward Organizational Health

If a basic philosophy of organizational health is to be defined, how is a going organization to begin to establish the processes that lead to health?

The first step is for the company to define what it wants to include in its concept of organizational health. The second step is to translate the concept of health into actual behavior so that it can be practiced. This will lead naturally to the third step, that of developing criteria to measure and evaluate the state of the company. These criteria, in turn, can then be applied to executive development programs—and any other program for that matter (e.g., performance ratings) to see if they are facilitating or inhibiting organizational health. Defining organizational health will also help to answer questions upsetting every executive exposed to traditional human relations courses; namely, "How *inhuman* can an executive be and still be human?" "Are there times when it is right to ask people to give of themselves for the sake of the organization? Are people *always* the important factor in a company?" (Our data show that employees seriously doubt the validity of this notion.)

> *". . . Effective leadership is no different from effective living. The effective leader seeks to grow (as does the organization), to discover and put into use his full potentialities; he seeks to enhance his sense of self-confidence and trust; he seeks these for himself and simultaneously strives to create relationships where others can seek these processes of growth should they so desire."*

Second, changes need to be made in the organizational structure, managerial controls, and the leadership patterns. Unfortunately, no one (to my knowledge) has come up with fundamentally different organizational structure and managerial controls than those being used presently. Therefore, no concrete recommendations can be made in these areas at this time. However, the void of knowledge can become the challenge of the future. And it is this challenge that provides the basis for organizational development. As soon as effective leadership is successfully being developed the organization can begin to put it to work by asking the executives to focus on *how to reorganize* the organization emphasizing the *processes of growth* rather than the statics of formal charts and procedures, etc.

But what is effective leadership? As I interpret the research, effective leadership is no different from effective living. The effective leader seeks to grow (as does the organization), to discover and put into use his full potentialities; he seeks to enhance his sense of self-confidence and trust; he seeks these for himself and simultaneously strives to create relationships where others can seek these processes of growth should they so desire. These are characteristics of effective leadership.

Developing Effective Leaders Within the Organization

How does an executive begin to develop the wisdom of effective leadership, indeed effective living, while participating in the organization? The key is to try to develop a climate for human growth that is so pervasive that it

nfluences the executive to think of his and others' growth hile he is immersed in the solution of technical problems nd in the making of decisions of everyday organizational fe.

This objective is extremely difficult to accomplish. It equires, for example, that as the executive goes about his veryday business, he needs to experience human relationhips that permit and encourage him to focus on his impact pon others and their impact upon him. While solving, for xample, a production or budget problem with others, pportunities should be made available to him (1) to look t how he is actually influencing the subordinates, superiors nd peers (and vice versa), (2) to help him become aware f the degree of freedom he provides others to grow; in hort, to see more clearly how others see him and to disover to what extent his impact upon others is what he hinks it is.

In order to develop these new awarenesses the executives nust establish an "executive culture" in which spontaneous nd full feedback to one another is not only possible but it s rewarded.

The executive also needs to experience opportunities here he can question the very "guts" of the company's ake-up. Does the present organizational structure help he organization achieve its objectives? Does it facilitate r inhibit executive growth, organizational flexibility, prob-em solving, etc.? What can be done to create new types of rganizational structures? Why does the organization need o have only one kind of formal structure? Are there ways e can re-evaluate the value of budget systems, incentives, uality control, motion and time studies, etc. in order to elp mold an organization that facilitates executive self-evelopment?

unctions That Facilitate xecutive-Organizational Development

In order to help the executives to tackle individual-organiational growth, the company must provide highly skilled rofessional assistance. Knowledge and basic human skills f effective individual and group functioning, for example, ould be very important. Skills in conducting organizational esearch that truly diagnose the organization as a whole iving system are also crucial and must be made available.[8] he research competency will not only include conducting e research and analyzing the data. The research data must so be fedback to the organization.[9]

It is important to keep in mind that research is not fedack to prove someone wrong or right. It is a means mangement uses to increase their information about the comany *and* by considering proper actions in view of the new formation to continue their self-development and to enance the growth of the organization.

Another crucial function is training. There may be many stances where executives will request concentrated training through "living experiences" where they can increase the speed of their learning of the processes of individual and organizational growth. The training will need to operate on different assumptions than those found in most companies today.

More concretely, examples of the basic assumptions are:[10]

1) If an individual is to educate his "whole" self, *his behavior* becomes a fit subject to learn about and to understand.

2) Anybody who aspires to positions of power over people in our society is responsible for becoming more aware of his own self and the systematic knowledge that exists about human behavior; he needs to become proficient *in human wisdom of quality living.*

3) Although a man may be taught *about* self-insight and quality living, these can be *acquired* only through living in, and learning from, a particular kind of experience.

4) This experience will provide an opportunity for the executive to behave "naturally," and "spontaneously," to have this behavior caught by the "human cameras" of other individuals, and then to feedback this "human movie" to the individuals who created it. Since the door to self-awareness is locked from the inside, no individual should be required to take such a course. Neither should a man, having taken it, be required to change his behavior. No one digs any deeper than the individual digs for himself. The responsibilty for changing is left strictly to him.

The Future Role of Personnel Departments: The Department of Organizational Health

Herein lies, I believe, the future of personnel administration. No longer will it be a department run by, as Dalton McFarland aptly puts it, "the garbage can theory." Nor will it be the department which optimizes the control over human growth. Personnel people may say they like people; they may say they want to help people grow. Nevertheless the facts are that many of their core activities, (wages and salary administration, testing, selection, merit-ratings, etc.) fundamentally control human beings and prevent them from feeling a need to develop as individuals or to be responsible for their personal growth.

The function of personnel in the future, as Professor Thomas Spates emphasizes, will take its cues from the increasing behavioral science research.[11] The major objectives of the personnel department of tomorrow will be to facilitate quality leadership and healthy organization through the functions of skilled consulting research, and training. In short, the personnel department may provide the foundations for, and the resources with which, the organization can focus more competently and effectively on its total development and growth. ■

For an excellent discussion of some of the different organizational eories see *Modern Organizational Theory*, Mason Haire, ed., John iley & Sons, 1959.

rgyris, Chris, *Research Methods in Organizational Behavior: One int of View* (in press).

[10] The conferences offered to executives by the National Training Laboratory are based on these (and other) assumptions.

[11] Spates, Thomas G., "Personnel's Influence Diminishing?", *Personnel Journal*, vol. 35, no. 7, December, 1956, pp. 246-247, and *Crisis and Promise in Collective Bargaining and Interpersonal Relations*, Bureau of Industrial Relations, University of Michigan, Ann Arbor, 1958.

Everyone Participates in Work Simplification

....A Program for the Modern Company

By HERBERT F. GOODWIN

"People can be taught to use the tools compatible with their level of activity. They also can learn to recognize the need and request service from those with other capabilities . . . This is the organized use of common sense."

"WORK SIMPLIFICATION" as a term was first used by Professor Erwin H. Schell of Massachusetts Institute of Technology to describe the improvement program devised by Allan H. Mogensen in which every member of a business enterprise could participate.

During the past 25 years Mogensen, the staff of his Work Simplification Conference, those who have attended the Conferences, and many others have joined in the development of this effective program of improvement.

Work Simplification began with Motion Study and the simple process of teaching the Tools and Techniques of the Gilbreths to management, supervision and the entire work force. "Everyone in the organization a junior industrial engineer" was one of the early objectives. The very simplicity of the term itself coupled with the broad publicity given its immediate success has become the greatest barrier to a more universal acceptance and wider application.

Some Instances of Work Simplification

The reason why we may not really know what Work Simplification is in many instances is the simple fact that we think we do. A manufacturer designs a new machine and sells it on the basis that it will make work easier; an expert on TV instructs the housewife in easier methods of doing her chores; an engineer or a supervisor devises a new assembly fixture and sees that it is used in the shop;—all of these are described as Work Simplification. The results may, in fact, be the simplification of work. But none of these could be called Work Simplification as we know it today, unless we know more about the circumstances under

Recipient of S.A.M.'s Gilbreth Medal in 1956, Mr. Goodwin is Assistant Professor of Industrial Management at Massachusetts Institute of Technology

hich the improved method was derived, the way it was stalled and the ultimate effectiveness of its use.

It is not enough to be able to find improved methods of oing things. It is not enough to see that people use these ethods, and that the change is implemented with eventual avings in time and money.

Mogensen discovered that those who had developed improvements were spending a major portion of their time ealing with the problems of installing those improvements, vercoming resistance and resentment and maintaining them application. He shifted the emphasis to the human relaons involved, to the people who make up the organizaon, to the method of finding the improvement through rticipation and set the stage for acceptance to change.

An eminent surgeon discovers that a small investment his time participating in improvements beneath his level sults in his spending less time fussing with unimportant tails and thus gives him more time for his high level eative activities. The president of a company who also s five children discovers that a regular family meeting nce a week formed in the interest of improvement results higher goals being established, better relations between embers of his family, an increased interest in self-improvent and better communication. An industrial engineering pert finds that during his extended absence an entire ganization responds to their own needs, redesigns his ols and techniques to suit themselves based on their own perience, and makes applications to their own activities all levels in the organization far more completely, thorughly, and quickly than he was ever able to do himself. his is the way Work Simplification has developed.

You are using Modern Work Simplification when everye participates in the improvement process, each to the tent of his ability. This is done in an atmosphere of iendliness, teamwork, understanding, sincerity, mutual nfidence and respect. Fears and inhibitions are minized. Opportunity, satisfaction and recognition exist at l levels. All of the tools of improvement available are appropriately applied within this framework. Not only the tools of motion study, but all of the tools of industrial engineering, of science, of mathematics, and those of developing creative teamwork are applied on a common-sense basis. People are taught to use the tools compatible with their level of activity. They also learn to recognize the need and request service from those with other capabilities. The expert and specialist take on a new role of supplying answers to requests for assistance as opposed to trying to sell their services. Projects are programmed in every area of activity and selection procedures are set up to establish priorities for the investment of time in improvement activities.

Time available is scheduled both on and off the job. Not only for developing improvements and putting them into effect, but also for reviewing progress and affording appropriate opportunities for recognition.

This is cost reduction on an organized basis. This is intelligent management of the improvement potential and capabilities of the entire organization. This is everyone participating in Work Simplification as the vehicle for obtaining their common objectives. This is the organized use of common sense to find and apply better ways of doing anything.

We can summarize the broad objectives of Work Simplification as follows:

- Increased rate of improvement as a result of the coordinated efforts of everyone in the organization to achieve this goal.

- Accelerated personal development and advancement of the people who participate in the program, as a result of their participation.

Setting Up Your Own Program of Participation

It is easy to start a Work Simplification Program. In today's squeeze of rising costs and highly competitive selling prices it is not difficult to hit a note of accord with your top

executives with a proposal to reduce costs through the vehicle of Work Simplification.

A good program begins with the man who can say "yes" or "no" and mean it. He must be interested not only in launching the program in order to obtain the desired objectives, but he must be willing to assume the role of leadership necessary to give effective backing to the program. He must understand the importance of investing a small portion of his time so that the rest of the organization can be effectively stimulated to participate in the improvement activities. A good way to begin is to get his permission to experiment with Work Simplification and to let the results of this experimentation establish the pattern for continuation. Most executives today are willing to back such an experiment.

It is more than likely that someone else in your organization is interested in Work Simplification. Two heads are usually better than one. A man from the line teamed with one in a staff position, who together have the ear of the chief executive, is perhaps the ideal. Often there are men in both line and staff positions who are familiar with the tools and techniques used and only need grounding in the latest procedures for handling the human problems and setting up an effective program. Ideally this pair might attend the Work Simplification Conference at Lake Placid. A good background may also be obtained at many of the special courses offered by our educational institutions. Be sure that the material offered emphasizes the human problems, and how to effectively organize improvement through participation. Often this may mean attending two or more courses because of the feeling in some areas that the tools and techniques of improvement are a different discipline than that of handling the human relations involved. In any event, do your own thinking. Set up your experiment with the objective of finding out what is the best approach in your own company, with your own people.

Experimenting with a Pilot Group

Every activity in the company should be represented in the pilot group. The nearer you can come to have top representation from each department the better it will be. Twelve to sixteen people is a good size with which to begin. Those who have led many groups in discussions of Work Simplification have different preferences as to the appropriate meeting time and place as well as the length of the session. Personally, I prefer longer sessions, from 2 to 4 hours in length, so that participants can really lose themselves in the thinking. These matters should be put up to the group and the leader will naturally have to be guided by the feelings of those involved.

The key to flexibility is to make every decision a tentative one and experiment from the very beginning with every related aspect of the program. May I refer you to a Survey on Work Simplification conducted by F. W. Simerson of the Factory Management Division of Sears, Roebuck & Company. Mr. Simerson will be happy to send you a copy of it.

After the introduction and opening remarks which emphasize the exploratory nature of the business at hand, the basic philosophy of improvement utilized in Work Simplification can very readily be developed by giving the group an opportunity to do it. A request to one member of the group to perform a simple hypothetical operation such as collating some different colored papers or assembling some pegs to a board can set the stage. A lively discussion usually ensues while various members experiment with different methods of performing the task. It is easy to develop the fundamental philosophy of Work Simplification from what they did and said.

The group had *fun* as demonstrated by their obvious enjoyment of the experiences. The opportunity to participate and contribute their own thinking was satisfying and rewarding.

Improvement is *natural*. People do not have to be asked to make improvements or compete for the opportunity of contributing their ideas if they are given the opportunity to do so, provided they are not afraid. In order to demonstrate this point the leader must refrain from mentioning terms which imply that the group should improve the operation. Experiments have been conducted in numerous places where

"Mutual confidence and respect are the foundation on which all human relations are built. Work Simplification attempts to establish

groups of complete strangers have demonstrated a willingness and natural desire to improve by actually doing it.

It is easy to get agreement that the accomplishments were made as a result of better *methods*. No one worked harder or faster. They found an easier way. This discussion leads the group to the opinion that the demonstration was more than just an illustration of improvement through better physical methods. It was, in fact, a demonstration of better leadership and management of the improvement potential latent in the group assembled. Work Simplification thus embraces far more than just the performance of physical tasks. It includes improvement in management skills and leadership qualities as well.

An insight is gained into such things as learning from the experiences of others. There is realization of the inadequacies of certain instruction methods. A feeling of closer relationships with those involved in the demonstration usually develops. Communication lines are freed and are used spontaneously.

The next step in a typical discussion is to review the positive motives to which one can appeal in creating the desire to participate in Work Simplification. With a dozen or more people in the group it is an easy task to get a list of at least this many thoughts on how they might benefit as individuals as a result of participation in such an improvement program. A summary of these points would include an interest in and understanding of people at the top of the list. A new importance to one's responsibilities, more effective presentation of new ideas, the ability to stay out of a rut, and the enhancing of one's own position are the others that appear most often.

The interest of the pilot group can then be directed toward the most important factor in the improvement process — people. What is the attitude of people toward change?

What are the implications of criticism as it relates to improvement? What about the fears and insecurities people feel toward the results of improvement? Why do people feel the way they do about all this? What must we do to improve the climate and set the stage for better understanding and more rapid improvement? How can we demonstrate the effectiveness of creative teamwork and the importance of the individual as a part of the team?

By the time any group has completed a discussion in an attempt to answer these questions, they have opened many doors to understanding the human factors involved. They have gone a long way toward reviewing the underlying philosophies behind the Work Simplification approach. They begin to see the value of getting everyone to participate in the improvement program.

What About Resistance and Resentment?

These are two of the fundamental characteristics of human nature with which we must deal in Work Simplification. Professor Schell of Massachusetts Institute of Tech-

tion upon which acceptance to change is tablish such an atmosphere"

nology has said, "You can have change without improvement, but you cannot have improvement without change."

It is the objective of Work Simplification to find ourselves building acceptance through participation and a better understanding of why resistance is so often evident. If we reflect on why we ourselves resist change it becomes quite clear that the reasons include fear, mistrust, suspicion, and uncertainty about how it will affect us. Few of us ever resisted a change when we participated in the development of it. Mutual confidence and respect are the foundation upon which acceptance to change is built. Work Simplification attempts to establish this atmosphere through its friendly approach.

Change to a better way of doing anything implies criticism of the present method. It is natural that people with pride in their work resent this implied criticism. The creative teamwork and cooperation evidenced by people working together does much to minimize the ill effects of criticism. It is surprising how vehemently people will criticize themselves under these circumstances. Participation develops a willingness to ignore the ill effects of criticism in favor of the satisfactions associated with accomplishment.

The Tools of Improvement

Work Simplification teaches the use of all of the tools available. The organized, logical, step-by-step pattern devised originally by the engineer and scientist becomes the basic tool of analysis. The situation or activity selected is defined, limited, or described by using words, charts, diagrams or models. Appropriate brains and experience are brought to bear on each part of the problem. The combined creative thinking of the group is applied on an organized basis and possibilities for improvement enumerated. The alternatives are then evaluated economically and tempered with judgment with respect to the human problems peculiar to each. Experimentation and trial followed by re-evaluation is utilized wherever possible. The preferred improvement is thus developed. Finally, and most important of all, a plan of action is established as a result of the effort to insure effective use.

In accord with the level of intelligence, experience, and education of the particular group, the presentation of this material can be confined to the most simple procedures or can be expanded to include the more technical. All groups, beginning with the initial pilot group and including all subsequent groups, are taught to recognize the value of the specialist and expert, request his help and solicit his advice. Such specialists soon find themselves working in an atmosphere of respect and confidence that enhances their effectiveness.

Program Improvement

Work Simplification, in essence, is the vehicle for programming improvement throughout the organization. Lists of projects made during the educational sessions from which practice projects were selected become a backlog of projects for continued application of Work Simplification philosophies and principles. New lists from new educational groups, regular requests for additions, periodic reviews of high-cost operations or materials, and constant reassignment of priorities keep the list growing and current.

Regular budgeting of time for improvement activity is a significant procedure. The higher the level within the organization the more time would normally be invested. The man in the shop and the girl in the office on routine tasks would normally become involved a very small proportion of their time. An engineer, on the other hand, might find his entire day consumed in the creative activity of improvement. May I refer you to my own article in the January 1957 issue of *Advanced Management* for a more detailed discussion of this philosophy of programming.

Setting Up a Progress Review

Executive review of completed projects which reflects credit on the participants and extends encouragement to all of the organization is perhaps the most important factor in establishing a healthy, continuing program. Enthusiasm and interest run high in such meetings which are often scheduled on a monthly basis. The meetings become an open line of communication exemplifying the simple philosophies upon which Work Simplification is based.

A most effective means of extending recognition as well as reporting progress is to show documentary films of the project work. They tell the story of the people involved and the methods they used at arriving at the solution. Participants hold the place of importance as executives and department heads fete those who have really made the improvement possible and successful.

Your program may begin quite differently. Particular circumstances dictate the need in each instance. The way "it wants to be" in your organization is the way it will work best. The important thing is to get started. It will grow in fun and effectiveness as *everyone participates.* ■

The Public Adrat
As a
Professional /;er

—As ivate

By ROBERT B. CURRY

Although the managerial ability of the public administrator is well known to some, the average businessman too often views him as an inefficient bureaucrat. Through increased participation in government operations, says the author of the following article, many businessmen have acquired a more sympathetic view of 1) the complexity of the public administrator's task, and 2) his role as a competent executive.

drrator

a

ger

– As ivate Industry

ditional
sman's view
government employee has
most completely negative–
ly negative that it
e considered biased

Mr. Curry
is Vice President and
Comptroller of the
Southern Railway System

IN ORDER TO GIVE a fair commentary or make any sort of objective analysis of what private industry thinks of the public administrator, one should approach the subject from a number of angles. The ones I have chosen to deal with here are the positive contributions made by the public adminstrator, some traditional concepts of the public administrator, some problems common to most organizations, the need for outsiders to know more about their government's operations and the problems it has to face, and finally, the reactions of some of the more prominent members of our business community who have served in the Federal Government.

Positive Aspects of the Public Administrator As a Professional Manager

Creditable professional managerial attainments have been recognized on the part of the Federal Government, some states (notably New York and California) and a few cities (Cincinnati for one). For brevity, let us merely enumerate the areas of the most significant advancement of management by the public administrator in each of the past four decades:

- *In the 1920's:* Budgeting and financial planning.
- *In the 1930's:* Personnel administration and other staff functions.
- *In the 1940's:* Consolidation of the staff activities into control concepts.
- *In the 1950's:* The current, outstanding effort in computer utilization.

The outstanding leadership of the public administrator in these fields is well known to students of management. Those who have had the opportunity and the inclination to look into the contributions of professional managers are fully cognizant of the positive aspects of the public admin-

---

This article was adapted from a recent address by Mr. Curry before the Cleveland Chapter of the American Society for Public Administration.

istrator's leadership in advancing the art and science of management.

While this familiarity exists on the academic side, however, it does not follow that private industry is nearly so conversant that it considers the public administrator a professional manager. Indeed the converse is generally the case when it concerns the "average businessman." Thus, we must look at traditional concepts before examining the more sophisticated view of private industry.

Traditional Concepts of the Public Administrator

In contrast to the positive aspects, it is well known that the traditionally normal and general businessman's view of the government employee has been almost completely negative—so strictly negative that it might be considered biased.

There are grave difficulties in making such a broad generalization, and when the businessman generalizes on such a subject as this, he is apt to be opinionated and confused. It is only natural that men in business do not like any organization or an organization man, not operating under the same profit motive and comparable tax burden.

The contradictory situations which constitute the businessman's view of the public adminstrator include a number of anomalies. Here are a few examples of many such inconsistencies:

The public adminstrator is a political appointment. (But in the next breath he is a mere incompetent clerk, a permanent fixture protected by Civil Service.)

Civil Service employes could not earn a living elsewhere. (Yet business continues to hire away from Government scarce specialists and the most competent generalists.)

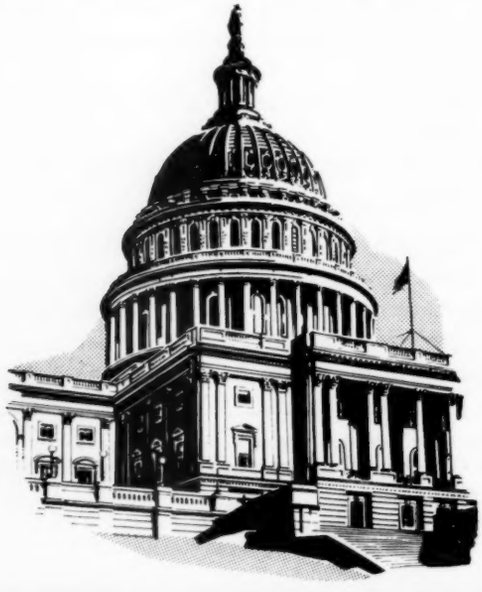
Civil Service should protect from political change. (Vs. the theory that a political change should be able to appoint its own.)

In spite of contradictory and confusing aspects in portraying a consolidated picture of the businessman's views, there are several recurring concepts that the public administrator must examine and constantly re-examine to determine their applicability to himself, his operation and his organization. With respect to government work, private industry believes there is a tendency among public administrators (especially at the operating level) to:

1) Over-estimate the magnitude of their work,

2) Become over-imbued with the importance of their work,

3) Over-emphasize the necessity for continuing their work or the method in which it is performed.



We all know of some situations where these derogatory views are not without foundation and which justify the existence of these concepts. And those truthful enough admit these elements exist in industry as well as in government. But it does add up, all too often, in the opinion of the businessman and the public in general, that government employment and operations are the functions of Parkinson's Law; i.e., his theory that the level of employment of adminstrative personnel increases at a determinable annual rate whether the volume of work processed increases, diminishes, or disappears.

Continuing Old and Obsolete Methods

In government operations, as in industry, there is a tendency to continue old and obsolete methods offering feeble excuses such as, "We've always done it that way." or "This has always worked; why try something else?"

The classic example of perpetuating present systems is illustrated by the story of analyzing the personnel assignments and manning tables of the British Army in World War II — where, though 6 positions were provided for handling a mechanized field piece, there were only 5 job descriptions. In trying to run the question down, the survey team came upon the old retired, hard of hearing Brigadier who had written the manual. After understanding the question, he stammered: "The sixth man — you arm-chair officers — *he* holds the horses."

There are a lot of sixth men in today's business operations in government. There are in industry too; look at the prime example of the third man on a diesel freight engine, the fireman, with no fires to tend, no boilers to stoke.

The Need for Diplomacy in Recognition As a Professional Manager

When one is misunderstood on the need or the importance of his work, there is a tendency for him to become impatient and restless with those who cannot or will not understand. One is apt to withdraw just enough to appear over-important or to be over-emphasizing the importance or magnitude of his job. This must be guarded against.

Robert M. Hutchins once remarked that to become a good civil servant, one should start by becoming a *civil* servant. This is a positive approach in the development of tact in order to acquire a frame of mind, a receptiveness on the part of the public, which must be the first step in

achieving a proper understanding of the public administrator as a professional manager.

Reactions of Business Executives in Government

Now let us consider what I call The Exposed Businessman's View. This is the more current view of the public administrator held by many and particularly top businessmen, and encompassing a closed and sometimes an inside view.

The Federal Government today employs 2.3 million people in every kind of work, every type of skill, every level of technical specialization, and every profession. Through military or defense assignments involving governmental operations, service in advisory committee status, or service under governmental appointments, many businessmen have acquired a more positive view or at least have tempered their traditionally negative view.

The businessman has found that the Federal Government is, in effect, a corporation with 176 million stockholders. Its receipts and expenditures total $77 billion a year. It owns 472 million acres of land and 2.5 billion square feet of building space. Its real estate holdings are valued at $45 billion (actually a gross underevaluation). It has installations in every community, state, and territory, and representatives in every recognized nation in the world.

Through such reflections and associations, businessmen, or at least some businessmen, have come to realize the gigantic size and inextricable complexity of the public administrator's problem.

Businessmen who have served with the current administration have offered numerous comments.[1] Many cited certain frustrations with legislative complications, but accepted the need to provide checks on the Executive Branch of the Government.

Considerable concern was expressed, however, of irresponsible legislative attack. Deploring the slanderous attacks on public officials, George Humphrey said: "Our composite democratic attitude seems to be 'If you can't take the heat, don't come into the kitchen'." This may be sound advice, but hardly conducive to better public administrators.

Nathan Straus, radio executive, cited three main factors in distinguishing government from business:

1) *Red Tape:* New ideas must go through a period of checks, which sometimes causes frustrations; yet government red tape is only slightly greater than that of most large corporations.

2) *Civil Service Requirements:* These restrict recruitment of skilled personnel and well qualified people for high level jobs.

3) *Congressional Criticism:* This is sometimes purposely destructive.

Ralph Budd, manufacturer and railroad president, who also served in a business capacity for the Government, offers as a general comment:

". . . One of the serious problems of government is the tendency of bureaucratic workers to continually build their staffs and 'carry their empires' far beyond the actual needs of the situation."

George Talmadge found that government pay seems to be based on the number of employees under an official, rather than on the extent of his power or the importance of his decisions.

Inland Steel's Clarence B. Randall felt that in many cases, a top governmental executive is similar to a chairman of a debating society who must guide discussion and persuade.

The businessman brings a different approach to government problems, one which provides a balance with the deeply dug-in habits of the professional government career man. Robert A. Lovett, partner, Brown Brothers, Harriman & Co., found his experience in government was so thoroughly pleasant that he could overlook minor frustrations. He had no feeling that the government was a mass of inefficiency, but considered it comparable in efficiency to most business organizations, the principal difference being the absence of the profit-and-loss factor in government.

He did add, however, that committee work is a trend of modern management which has gone too far in government. I think most of us would agree.

Summary and Conclusion

To summarize, our basic problem is to secure a better understanding on the part of the businessman that the public administrator is a professional manager as well as a truly dedicated public servant. Continued exposure of the businessman to the public administrator will in itself promote better understanding of the role of the latter, and overcome the traditional negative view of the public bureaucrat.

Meanwhile, the public administrator can best contribute to better public understanding in general by assuring that all contacts with the public, direct and indirect, in no way create or foster the impression that he over-estimates the magnitude of his job, is overly imbued with its importance, or over-emphasizes the necessity of continuing his work or work methods.

Today, the businessman knows that the survival of the democratic concept we accepted from Ancient Greece, depends upon the government of the United States. He also knows in the final analysis it depends upon professional managers, both public and private. ■

[1] Source of this material is a study, *Businessmen in Government; An Appraisal of Experience*, issued by The Harvard Business School Club of Washington, D. C.

AUTOMATION:
Its Impact on Management

EFFECT OF AUTOMATION ON . . .

ORGANIZATION:

"Acquisition of managerial responsibility by the technician is one facet of a more general change in the structure of management — the weakening of the 'Line and Staff' principle"

MAINTENANCE:

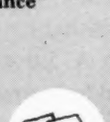
"Automation emphasizes the need for preventing equipment faults, as distinct from repairing them"

MANPOWER:

"A sharp clash of interest over redundancy can often be avoided if problems of manpower are considered well in advance"

TECHNIQUES:

"Chief among new techniques will be a systematic study of operations, conducted as scientifically as circumstances afford"



EDUCATION:

"New courses will be wanted at the universities and technical colleges, but there will be a complimentary demand for training that is tailored to meet the needs of individual companies and industries"

By JOHN A. BEKKER

WE ARE IN MIDST OF a second industrial revolution, the era of automation. This time it is not man's muscles that are to be replaced and extended, but rather man's brains and senses. More specifically, what is meant is that in business and in industry the functions accomplished by people are going to be carried out more and more by complete networks of complex automation systems. These systems will utilize what might be called "synthetic intelligence" devices and replace and extend man's brains and senses in a wide variety of pursuits in which humans are engaged. And anyone who is foolhardy enough to challenge the idea that the replacing of man's brains will be one of the top industries in this country some years hence is in danger of having his brains among the first to be replaced.

Considerable attention has been paid recently to the technological phases of automation as well as to its social and economic implications and complications. Here we are interested in the impact of automation on management.

Automation need not seriously affect the traditional problems of management until it is extensively employed in business and in the factory. This discussion is, therefore, mainly concerned with factories and businesses that have reached, or will reach, that stage. It does not cover all the implications for management (as they extend to every routine managerial function and problem) but only the most significant of them. Nor does it attempt a review of the implications in detail for all the industries concerned. It concentrates mainly on the engineering industry, where automatic processes are novel and the new problems of management are widely debated. But most of the arguments apply equally to the process-industries and other manufacturing industries, where automatic processes have existed for some time. Many of them are also relevant to other kinds of technical innovation.

The employment of automatic techniques of production has three main consequences, so far as managerial problems are concerned:

Dr. Bekker is Professor of Industrial Management at Duquesne University, Pittsburgh

- An increase in the technological complexities of production;
- An intensive technical integration within processes by which, for instance, machines are linked and components or materials are enabled to flow from one machine to the next; and
- High capitalization, with machinery claiming a bigger share, and labor a smaller share, of production costs.

These trends, of course, result from any kind of mechanization. However, they are strikingly intensified by automation. They increase the responsibilities of management by requiring a heavy investment of capital and a high rate of output, and by rendering plants more inflexible in terms of what can be produced. They increase, in fact, the need for scientific planning and control of a very high order.

This is the main challenging implication of automation for management. It will be more important than ever before to plan the construction of a new plant well in advance. Each item of equipment will have to be most carefully selected with the basic needs of the whole plant in mind, because unsuitable equipment may result in lower efficiency of the entire system. Possible techniques of automatic production will have to be considered when working out the designs and precise functions of given products. Likely trends in consumers' demands will have to be studied closely with a view to discovering how adaptable the equipment will need to be.

Planning will be equally necessary once a plant has been established. Its main task will be to maintain a high output by devising suitable programs of operation and changing them when necessary. Three organizational tasks will become essential: to overcome the technical inflexibility that usually occurs in automatic plants, as in all highly integrated plants where processes and machines are functionally linked together; to find an adequate system for the maintenance of automatic equipment; and to arrange, where appropriate, that the various automatic processes run continuously.

Automation also implies important changes in the techniques of management and places keen emphasis on the need for the systematic study of individual operations and for rigid cost controls.

Above all, the structure of management is likely to be drastically changed, since new types of management demand new types of managers and new qualifications for the tasks. Technical knowledge and training will be much more widely required than before. So will two human qualities — versatility and adaptability. The need for effective communication and close cooperation in industry will be greatly increased.

Structure and Organization of Management

Since the Industrial Revolution began, changes in the techniques of production have transformed the structure and organization of management. This is largely because enterprises have grown in size, but also because different structures of management suit different technological processes. For instance, the mass-production techniques developed and applied by Henry Ford could not be operated by a structure that had been developed for production in batches. There is always a danger that new techniques in production may be hampered unless the structure of management is altered appropriately.

There are a number of ways in which automatic processes call for new structures of management. Many of the new problems have already been encountered and in part overcome in the process-industries, which probably have much to teach to concerns that are new to automation. There is a need for intensive research into the structure of management in industries with different technical processes, especially those with highly automatic processes.

Automation increases the role of the technologist in management. Automation, in common with other developments that render techniques of production more intricate and complex, requires that scientists and technologists should find their proper place in management. This is an important imperative, because technical considerations affect an increasing number of policy decisions on investment and on the routine operations of plant. The need is two-fold: for managements to have a broad understanding of the new principles emerging from scientific and technical developments, and for technologists and scientists to appreciate more clearly the economic and other managerial factors involved in the implementation of their skill and advice.

It seems inevitable that scientists and technologists will become members of the top-management team more frequently than in the past. In addition, some functional departments are likely to become more important than they have been. For example, the importance of main-

tenance will increase if the cost of down-time becomes prohibitive. Above all, the design and manufacture of products will need to be much closely integrated if the best use is to be made of automatic production. These structural adjustments are likely to be achieved most smoothly where the technical departments already have an effective voice in management. Difficulties may be encountered where these departments have been traditionally "on tap but not on top." The effect of technical innovations on the structure and organization of management should be incorporated in more research projects on change and adaptation in industry.

The acquisition of managerial responsibility by the technician is one facet of a more general change in the structure of management — the weakening of the "Line and Staff" principle which, though traditionally used in mass-production, may need to be closely re-examined to see whether it is suitable for automatic processes or whether new principles are more appropriate.

The principle has, in fact, two possible disadvantages. The first concerns communication within the factory. Two types of rapid and effective communication are needed in automatic processes: first, between the machine-minder, maintenance personnel and technical specialists in the event of a machine breaking down; and second, between the various technical specialists who set up the plant and correct faults in its operation. If the structure of management impedes communication of either kind it may have to be changed.

There are reasons for believing that the "Line and Staff" principle is a case in point. When faults need to be remedied quickly, the machine-minder may have to draw on his intimate knowledge of his own piece of equipment or process and call in the right specialist department without going through the chain of authority on the line. In instances like this the essential working link is between the operator on the line and the technician, and the job of the foreman may be drastically modified. He may be less concerned with decisions that affect production than with keeping records such as the level of stocks and the number of shifts worked. He will, moreover, be less needed in the role of "man manager," as discipline will be provided more by the technical process through the occurrence of faults, and less by managerial controls.

A second general disadvantage of the "Line and Staff" principle is that it encourages the growth of separate and rigid functional "empires," with ideas and objectives that are determined as much by specialist and professional interests as by the needs of the concern. Automation requires technical experts to be flexible and cooperative, rather than rigidly specialist and competing. It is not yet known whether an alternative structure of management could fulfil this need better than the "Line and Staff" principle.

The foregoing remarks emphasize the need for close cooperation between technical experts in the management of automatic processes. Such objective will be reached only if the specialists exchange information freely and rapidly and reach effective decisions jointly.

Thus, co-operation within management will be at least as important as the co-operation between management and workers that has been greatly emphasized in the past. There appears to be no reason why the experience gained in improving relations between management and workers should not be deployed with equal benefit to problems of co-operation within management.

Communication within management may also be affected if electronic computers are employed to digest a large amount of numerical data and to provide indices that can give warning of necessary managerial action. The use of these indices can enable managements to control operations more effectively and may increase the number of men that a manager can supervise.

Manpower Factors and Requirements

The growing speed of technical innovations makes forward planning more essential than in the past. Plans should include, among other things, estimates of manpower requirements. In recent years there has been much talk of resistance by labor and management to technological changes, and there is a growing appreciation of the need to preserve sound human relations during the period of change, and especially to inform and consult workers in advance.

Resistance to automation may be difficult to combat if it is based on the belief that redundancy cannot be avoided. Ways of avoiding redundancies need much more study than has been undertaken so far. No tactical approach, however wise, is likely to win the consent and willing co-operation of those whose jobs are threatened. But a sharp clash of interest over redundancy can often be avoided if problems of manpower are considered, as an integral part of forward planning, well in advance of expected crisis.

The planning of manpower is based on several factors: prediction of future technical developments within a firm or industry, taking account of economic factors; an assessment of the skills required to operate new technical processes; information on possible sources of manpower; and a long-term plan of training which will enable the demand for and supply of manpower to be reasonably balanced. Forward planning is necessary because it is becoming increasingly difficult to adjust supply and demand over a short term. Skilled labor is scarce. The higher the skill, the longer the period of training and the greater the time-lag between the recognition and the satisfaction of need. On the other hand, where labor is suddenly made surplus, it may be difficult to re-absorb. On both counts automation emphasizes the need to look ahead if demand and supply are to be kept in balance.

One potential result of planning for manpower is that training requirements can be stated well in advance. The requirements for automatic processes must vary from firm to firm but, broadly speaking, they are likely to involve training on the job for semi-skilled labor, the creation of a deeper technical understanding among craftsmen, and the provision of more highly trained managers and technologists. Many new skills will be required of operatives and

craftsmen and technologists and managers will have to meet numerous new specialist requirements.

Automation and Maintenance

One of the most important responsibilities of plant engineering and management is that of maintaining the plant facilities and equipment. Only if equipment is adequately maintained can it be expected to operate properly and thereby yield a product of high quality at reasonable cost.

Automation increases the importance of maintenance as a function of management, whether it is done by the makers or the users of machinery. It also emphasizes the need for preventing faults, as distinct from repairing them, so as to minimize the number of stoppages and to achieve, as far as possible, a high and constant rate of output.

Preventive maintenance must be based on an informed estimate of how machine-tools will perform; for example, what their relative speeds will be, how often they will wear or break down, and in what ways the quality of their work will decline as they wear. Analysis of performance will show which tools are liable to break down at random, with or without signs of wear or poor performance; which of them gradually wear out and then fail to meet requirements at a time that can be predicted within limits after analysis; and which parts will never wear out over the period in which the plant is likely to be used. The findings of such an analysis will provide the basis for future policies of maintenance that are designed to obtain the fullest possible use of automatic machinery.

It may be necessary to run automatic machinery continuously, either because it is costly to shut down a plant (in some process-industries, for instance) or because the ratio of capital to labor is high and the capital equipment needs to be employed as fully as possible.

Continuous operation raises several important problems and involves new costs. It depends on the availability of workers for shift work and managements may have to arrange special amenities like meals and transport at their own expense. It also depends on making adequate provision for the maintenance of plant. This is often not easy, for instance when a machine has to be stopped for maintenance. But even where continuity is impossible, a plant can be worked for two shifts and closed down for maintenance during the third.

Managerial Techniques

In pre-automatic processes, where output is controlled by the human operator, incentive schemes based on output are used to stimulate effort, just as training schemes are used to develop skills and time-and-motion studies to improve working methods. New techniques of management are needed when output is automatically controlled. Chief among them will be a systematic study of operations ("operational research"), conducted as scientifically as circumstances afford. Even fairly elementary studies often make it possible to forecast the prone consequences of difficult courses of action, and advanced techniques can be applied to complicated problems of forecasting. In addition, it is often desirable to analyze past actions so as to find features that can be improved and to refine methods of planning and forecasting.

Some managerial decisions cannot be postponed until all the appropriate information has been obtained and analyzed. But when operational studies are being made continuously, up-to-date information should be currently available. Also if research workers and managements keep regularly in touch with each other, they will very likely see the need for information early enough to allow time for special investigations.

Electronic digital computers can help (and modify) management in two important ways as a result of their capacity to store large amounts of information or do large amounts of computation with it. First, they can replace clerks on routine calculations, such as working out payrolls, so saving time, manpower and administrative overheads. Second, because they work fast and handle intricate data, they may do calculations that were not formerly feasible. In one instance, a distributing organization feeds to a computer the returns of stocks at each of its branches and so is able to view its stock position complete, up-to-date and in as much detail as is needed. Formerly it had to use sample figures and these, when ready, were out of date by ten days or more.

Using a computer, a firm could make and compare very detailed budgets for alternative schedules of future sales and production and could find which seemed to be the most profitable. Were it to study operations systematically, it might be able to use past experience of fluctuations in demand as a basis for assessing future possibilities. In this way it could estimate both the profitability of a schedule, if all goes well, and the risk, of all not going well.

If such possibilities are to be realized, managements will need sufficient understanding of what a computer can do to follow proposals for new uses. And those who work out proposals will need to keep in touch and sympathy with the aims of management. The main object is not to find uses for the computer, but to further the efficiency of management. For example, there have already been cases in which analysis of office procedures prior to mechanization has made great savings possible merely by streamlining work. Sometimes the savings have been so great that it is no longer necessary to introduce a computer.

It seems apparent from the preceding discussion that those who do research into operations must collaborate closely with cost accountants. For one thing, cost accountants will have to supply research workers with much of their information. On the other hand, automation, by changing the balance of costs, may throw up problems of method in costing that cannot be solved without studies in the factory.

One result of the change is that maintenance and amortization form a much higher proportion of costs than before. As a result, there may have to be a change of emphasis in ways of comparing and controlling costs. Rule-of-thumb methods of allocating overheads make an adequate basis for fixing prices, but they can be grossly misleading when used in estimating the real cost of alternative methods of production. Suitable methods of costing may have to be

developed in the light of studies on the shop floor so as to distinguish between three kinds of costs: those that arise from the amortization and servicing of capital (they enter into consideration only when there is a question of investing in new plant, but they may accrue even when a machine is left idle); costs, like maintenance and consumption of power, that arise directly from the operation of the plant, though they are generally classed as overheads; and the costs of labor directly involved on production.

For similar reasons, a plant with a high ratio of capital to labor will need different indices of control and efficiency. Indices showing the utilization of machines and the proportion of down-time due to breakdown, lack of work, or other causes, will become much more important than formerly, but the index of output per head will be less important. The attention of the production engineer will have to be diverted from questions of output per head, control of labor and incentives to questions like the utilization and the rapid and efficient maintenance of machines.

Automation's Impact on Education

Many industries will adopt techniques of automatic production in one form or another. It is uncertain how far and how fast automation will go, but the technical possibilities are great in both factory and office. Neither size of firm nor availability of capital seems to be a principal restriction, though progress will be most rapid in the bigger firms because they have the advantages of large-scale production and larger financial resources. The shortage of trained managers, engineers, and technicians may be the most decisive factor. It arises because the technical complexity of industrial production is increasing, partly through automation, and there are not enough scientists and technologists to go round. This problem is so important that a major reappraisal of university and vocational training in this country is necessary.

The supply of skilled technical manpower is very inelastic because a long period of training is needed, because the institutions of higher technical education can respond only slowly to industrial needs (even when stated, and it is difficult to state them precisely), and because a limited number of people have enough intellectual ability. There is an urgent need to define future training and educational requirements and to consider how they can be met.

The broad requirements are two:

- Training of engineers and technicians to give them a specialist knowledge of the techniques used in automatic production:
- Training in management for those who will have overall control of automatic processes.

For a thorough analysis it is necessary to know how many engineers and technicians will be needed for work on automatic processes and what types they require. This information can be obtained only by assessing the likely trends of automation in detail for each industry, and that assessment has not been made. Even so the problem should be given immediate consideration.

Engineers with a variety of technical backgrounds will be needed to man automatic processes: "control" or "systems" engineers who have a wide knowledge of techniques of control; engineers versed in both mechanical and electrical engineering and who will introduce techniques of control to traditional engineering processes; production engineers, who have a knowledge of statistical techniques and who will obtain the best possible performance from complex systems of machines; tool engineers, who can find the most economical and labor-saving methods of machining components, and, of course, electronic engineers. These future requirements strike across the existing boundaries of professional training and although some new courses meet them in part they have to be systematically appraised.

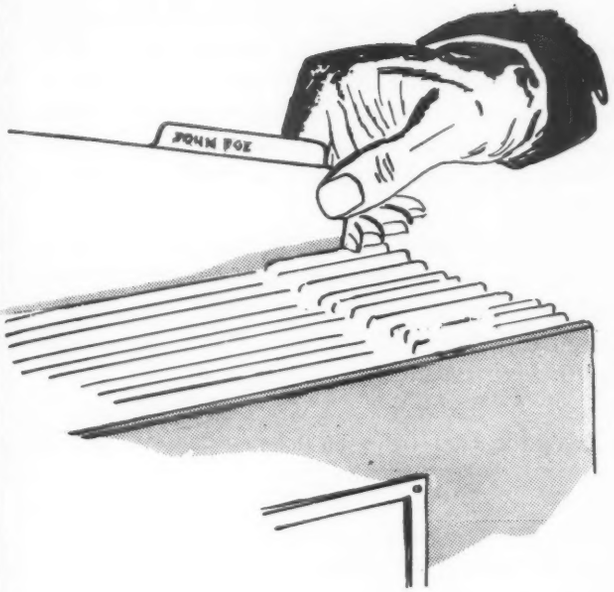
The same is true of the training of junior technicians and craftsmen. Though special courses in electronics will be needed (like the courses that helped to develop the electrical and radio industries), it is equally important to provide a broad vocational training, which will permit a flexible deployment of technical manpower, both in individual firms and in industry as a whole.

Industry may have to take much more direct action than in the past to secure the technical training that its future specialists will need. New courses will be wanted at the universities and technical colleges, but there will be a complimentary demand for training that is tailored to meet the needs of individual companies and industries.

Training for the management of automatic processes is linked with the training of technical manpower, because these processes break down the distinction between technical and managerial skills. Managerial decisions are vitally important when they affect the maintenance and operation of integrated plant and they can be taken only by persons who know the plant intimately as a technical system. Control will tend to pass into the hands of technicians and scientific learning will be asked to train students for management more than in the past. Automation will, in fact, reinforce a need that already exists because of growing complexities of modern factories.

Automatic production is also likely to increase the advantages of a *formal* training in management, because each plant must operate as a unified whole and this is best achieved by techniques of managerial planning and control which have to be acquired by formal training. Industry may need to take steps to secure adequate facilities for this, as well as technical training, and the universities and technical colleges will be expected to contribute much more than in the past.

Automation is here to stay. As Von Neumann once said, "For progress there is no cure." Automation advances give rise to numerous managerial problems and the solution of one generally produces another to take its place. But, then, such is the lot of management. Most of our progress is stimulated by opposition. The field of medicine, for example, has advanced by combating disease, education by combating ignorance, and law enforcement by combating crime. In similar manner, management has gone forward by combating problems. In a very real sense, management's job can be viewed as one of everlastingly facing and solving problems. ■



HUMAN RELATIONS IN ACTION....

A Case Study in Mismanagement

By JOHN E. BURNS

Appointing a man as head of an activity does not make him a leader: leadership must be won.

This is a case study. It shows the impact of interaction of the human factor in an industrial plant in the work relationship between the industrial engineering department chief and the engineers in his department and its effect on the engineers and the company. The time is now, during a nationwide shortage of engineers. The situation became evident when management consultants were making an executive survey in the corporation.

IN A LARGE manufacturing company, Karl Schmidt, [the name is fictitious] who has been with the corporation about 25 years, is head of the industrial engineering department which has a total of 14 engineers. He was appointed chief three and a half years ago when the department was substantially expanded. Prior to that time he had performed a variety of assignments in the industrial engineering area and was considered an excellent engineer.

Since becoming department chief, Schmidt has been extremely successful in antagonizing and alienating the majority of the engineers, the office staff and at least two of the three assistant department chiefs. Schmidt *may* have keen powers of perception, a good education, generous mental capacities, sound judgment, an abundance of physical and mental energy and strength, ability to work harmoniously with others, an appreciation and understanding of human nature, and other special leadership qualities

A former management consultant, Mr. Burns is Assistant Professor of Management at De Paul University in Chicago

that peculiarly fit him and make him adaptable to his position as department chief. But if he does have those attributes and skills he surely keeps them hidden. Assuming, however, that he does have all or most of the factors enumerated above, hidden though they are, Schmidt's temperament and personality are such that he is clearly unable to fit happily into his position and intelligently lead the organization which he heads up.

Diagnosis

Diagnosing the case, it appears that Schmidt is dominated by his wife, (she attended a company social affair with him) that he thinks solely in terms of the economic man, that he feels insecure, and motivated by fear himself he believes all others are likewise so motivated. He appears to be unable to think in broad general terms and seemingly cannot recognize human problems at all. He is tactless, arrogant, dictatorial, belligerent, conceited and suspicious, and gives evidence of feeling that anyone with ideas or more than average ability is after his job. He stubbornly adheres and clings to fixed notions (very strange for an industrial engineer) and exhibits contempt for the opinion of everyone below him in the organization structure. He has no perception of or grasp of the sentiments and feelings of the engineers and others. In general, he has the warmth of an ice cube although infrequently, at rare intervals, he thaws out a degree or two.

If Schmidt could operate in a vacuum, his shortcomings and failures in the area of human relations would be immaterial, as far as the department and the company are concerned, but, unfortunately, he does not function in a vacuum. Therefore, his shortcomings and failures have destroyed the engineers' morale and have resulted in an almost complete turnover in the staff. Generally speaking, the engineers are leaving faster than replacements can be recruited. Schmidt's blundering is all the more apparent since his immediate predecessor had been noted as an executive engineer with tact, diplomacy, persuasiveness and a sound understanding of people. The former department chief realized both as a staff executive and as a good manager that his work had to be accomplished through others and he was very skillful in human relations. But not his successor, Schmidt. Some illustrations of Schmidt's failure in human administration follow.

Incidents That "Speak"

The departmental meetings called by the chief every month are strictly a monologue. They serve merely to give him a stage on which he can swagger about and talk down to the engineers. For two years he held these "talks with himself" on Saturday mornings when the plant was not in operation, thus forcing the engineers to come down especially for them and practically waste the day. Invariably, he would start his monologue by telling the men that he had for 20 years been at the plant every Saturday morning and therefore he felt no qualms about calling Saturda meetings. Eventually, the open grumbling of the men, eve though they were paid for the meeting time, finally induce Schmidt to take a vote on whether to hold the meetings o Saturday mornings. The vote results were 100 percen against the practice, and he then shifted the meetings t Mondays.

As soon as Schmidt became department chief, he got ou the iron rod and arrogantly informed the engineers an office staff that all matters, no matter how trivial, mus clear through him. With this order he became a real road block to work progress.

Several of the engineers have completed work assign ments and passed them on to the department chief fo approval. In most instances that is the same thing as bury ing them because the chief has "stuff" on his desk almos a year old on which he has taken no action.

Just to make for "cordial relations" with one of th assistant department chiefs, Schmidt abruptly discharge the assistant's secretary without any notice to him and onl one day to her. Relations between the two men had bee strained long before this event.

On one occasion when Schmidt was out on the floo checking up on the engineers, he was tendered a copy o a professional journal containing an article on work sam pling studies written by the engineer who said that per haps the chief would like to take a look at it. The enginee had just received his copy of the publication and was i the process of reading his creative brain child when Schmid on his detective circuit came in. Schmidt refused to take look, offering as an explanation that he didn't have hi reading glasses on. However, the engineer could see them sticking out of the suit coat pocket. Schmidt offered n congratulations or other comment nor did he express inter est in reading the article later.

One of the engineers who was writing a textbook on hi own time made arrangements with the office service depart ment for typing. The engineer was to pay for the cost from the proceeds received after publication. He told his chie of the arrangement. Schmidt, after asking him in an insult ing manner whether he had an automobile and a television set, told him that in preparation of his publications he had never found it necessary to do such a thing, the implica tion being that the engineer was a spendthrift. No good wishes, encouragement or congratulations were conveyed. Actually the company policy was that all manuscripts would be typed without charge to the writer and moreover, the company would award 150 dollars to the writer of an ac cepted article and up to 750 dollars for a published text. Neither the office service department head nor the engineer knew of this policy. Schmidt did!

Schmidt apparently makes it a point not to acknowledge constructive suggestions. When that fact was brought to his attention by one of the men who had never received either verbal or written acknowledgment or any information as

uld be immaterial as far as the department and the company are concerned. But he does not."

o whether action was taken or contemplated on his suggestions, Schmidt replied that he assumed he was dealing ith mature individuals and that although he appreciated uggestions, he was much too busy to reply to them.

When things go good, Schmidt takes all the credit; when hings go bad, Schmidt doesn't hesitate to place the blame quarely on his men.

Grouping together a number of facts and incidents which re relevant in this case and yet which, if detailed out, ould not be materially more significant, there are the folowing items: Schmidt is an empire builder and has usurped ome functions which belong to other departments. He has ut into effect changes, which at times adversely affect the ngineers, without any previous consultation, notice or exlanation of the reason. He is completely indifferent as to hether or not he will greet his men when meeting them halls and other places throughout the company.

He never tells the men how they are getting along on the ob, doesn't give recognition for good work, makes no effort o develop any feeling on the part of the engineers that they belong," and takes no steps at all to keep the men interested in their jobs and the company. Briefly, he is a pathetic gure as a leader and the men have no respect for him.

ffect of Schmidt's Failure on Human Relations

The department is staffed for the most part with capable nd competent individuals educationally qualified and experienced in their specialty. Even Schmidt is learned, capable and competent in his particular field of industrial ngineering. But there is strong resentment among the ngineers and other personnel in regard to the chief's attiude and his dictatorial and arrogant manner toward them. His preoccupation with petty detail and inability to recgnize and understand what the department chief's job ctually is has resulted in great disappointment to the men ho feel resigned to negative leadership. Morale is at an ll-time low and a general feeling of indifference and frustation exists as day after day, Schmidt continues his bunling in the art of human relations.

Wholehearted cooperation is withheld, the engineers are orking at about 50-60 percent of their potential, and the eling exists that since Schmidt believes that he must peronally run everything, do all the thinking and make all ecisions, the best thing to do is more or less stand by and ait for the eventual crack-up. Further, many of the chief's ctions and words have been interpreted by the engineers o mean that they are considered in the social scale to have tatus and prestige below that of the office staff.

The engineers want not only economic security but also sychological, social and intellectual recognition in one orm or another and they want the personal satisfaction hat comes from being accepted and recognized as indiiduals of worth. They also want the feeling of identificaon with the company that comes from good leadership nd integration. But the non-economic wants are not satisfied. Talents of the men, which could well be used to further the goals and objectives of the company, go untapped and unused and industrial type of arteriosclerosis has set in throughout the entire department. The engineers are bitterly resentful not only of Schmidt but also of the company for failing to remedy what to them appears to be a most obvious case of executive incompetence.

In conclusion, it is significant to point out that one of the most tragic aspects of the whole case is that Schmidt, in addition to his ineptitude in handling people, does not recognize the influence of his personality upon that of others and he appears to be totally unaware that his administrative methods and techniques are seriously defective.

The company, however, must bear the major blame for the situation existing in Schmidt's department. Schmidt's superiors in the organization hierarchy made the mistake of appointing him, acting on the old fooling belief that the best worker makes the best boss. Appointing a man as head of an activity does not really make him a leader; leadership must be won.

The consultants proposed three solutions to the problem:

1) Appoint a new department chief and assign Schmidt to special studies and research, retaining department-chief rank.
2) Demote him back to engineer status.
3) Skillfully undertake a "re-education" job on Schmidt.

The third alternative was selected by the vice president of engineering and Schmidt was enrolled in a company-operated executive development program. In the third week of the course Schmidt went to the vice president and said that he "had enough of this personnel fancy stuff," and he felt it was a waste of his time. Without further ado, the first alternative was put into effect.

Epilogue

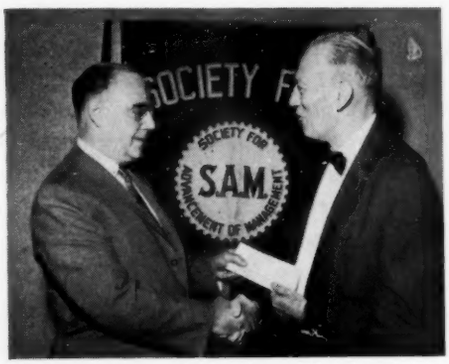
A year later on a follow-up of the case, the consultants found excellent departmental relationships had been established by the new department chief. There was a general feeling and demonstration of zest, zeal, enthusiasm, high morale and accomplishment among the engineers. Labor turnover had practically ceased. Schmidt, too, was delighted with his special studies and research assignment, and he had achieved some significant results. His contacts with the men were vastly improved now that he no longer had any authority over them. He confided to the consultants that he had hated his former job, that he liked his present one and he really felt like a new man. The benefits to the company under the new manager are astounding. More constructive work has been accomplished by the engineers in the one year under the present department head than in the three-and-a-half years under Schmidt. The men's basic wants and desires are satisfied by the new chief and a general air of well-being, trust, confidence and challenge permeates the department. ■

S.A.M. News and Notes:

National Awards Presented at Fall Conference

AT RIGHT is a view of the October 29th Awards Banquet of the Society for Advancement of Management, held in conjunction with its annual Fall Conference at New York's Hotel Statler. The following National Awards were among those presented at the banquet:

S.A.M.'s highest honor, the Taylor Key Award, was presented to Ralph Currier Davis (right), head of the Management Division at Ohio State University. Here he is congratulated by S.A.M. president Dause L. Bibby.



S.A.M. Chairman Phil Carroll presents Regional Incentive Award to J. Gordon Campbell, S.A.M. vice president for the Canadian Region.

Recipients of the Human Relations Award are cited for their work with the Pennsylvania Assn. for the Blind. Left to right are David Wise, William Witte, president Bibby, Charles Punton and Donald Farr.

Orange Coast Chapter president Robert Twom receives Harrington Emerson Award for outsta ing chapter performance. Making the presen tion is S.A.M. vice president Hugo W. Drue Other groups which received citations from Druehl in recognition of their performance dur the past year included S.A.M. local chapter the following areas: Providence, Greenvi Knoxville, London, Ont., Lehigh Valley a Reading.

Newly Formed Seattle Chapter Is Host to 500 at Dinner Forum:

MORE THAN 500 businessmen in the Seattle, Washington area attended the November banquet of the recently-chartered Seattle Chapter of S.A.M.

Featured at a dinner forum entitled "Politics, Government and the Individual," were: Sen. Henry M. Jackson (D.-Wash.) and William M. Allen, president of Boeing Airplane Co. Both urged their audience to take a deep and probing interest in government affairs.

Officers of the new chapter are Daniel J. Sullivan, president; Edward D. Brown, vice president; James W. Coulter, secretary; and Richard A. Johnson, treasurer.

Shown at the speakers' table are (l-r) Lyle Masterson, program vice president; Mr. Brown; Sen. Jackson; Dr. Hugh Bone, chairman of the Poltical Science Dept., University of Washington; Mr. Allen, Mr. Sullivan and Mr. Johnson.

University Division Chapter Performance Receives Recognition

Babson Institute: (Left to right) Jim Schwartz-[illegible]aupt, Peter Wilson, Ralph Vander May, Leon-[illegible]rd Parrot, Prof. Harold Fischer, David Prigmore, [illegible]chard Clark, James Finlay.

American University: (l-r) Don Nelson, Nick Pappas, Franklin Paulson, Sofia Cukier, Prof. Fischer, Carla Vandenberg, Richard Clampitt, Paul McDonald, Levon Garabedian.

Georgia Institute of Technology: (l-r) Prof. Jack R. Walker, Prof. Fischer, Richard A. Jones. Georgia Tech received special tribute for winning a total of five awards.

[illegible]ston University: (l-r) Prof. John W. Krey, Rod-[illegible]ey Schmidt, Prof. Fischer, Marvin Kaplan, [illegible]nthony Grabliauskas.

[illegible]oston College: (l-r) John Ryan, Donald DeGran-[illegible]is, Prof. Fischer, Charles Della Croce, Robert [illegible]ournier, Ronald Jagiello.

Citations Presented to Outstanding Student Groups at S.A.M. Fall Conference

THIS YEAR another new record was established in the S.A.M. University Division, with operation of 154 chapters and over 10,700 student members. The reports of chapter activities that were submitted in the Performance Awards Plan revealed continued vitality and quality of accomplishment.

Tribute was paid to the outstanding chapters, and awards were presented to the chapter officers at the October 29th Awards Banquet — a special feature of the two-day Fall Conference of the Society in New York City.

This recognition of outstanding achievement was made possible by the cooperation of the Remington Rand Division of Sperry Rand Corp., the Hamilton Watch Co. and General Electric Co. With their interest and support of the University Division Program, these companies made an important contribution to management education and an investment in the development of youth.

The Remington Rand Performance Awards, consisting of a citation, banner and cash awards, were presented by General Leslie R. Groves, Remington Rand vice president of public relations, and Professor Harold Fischer. Robert F. Wilson of the Hamilton Watch Co. spoke about the Hamilton Awards.

Georgia Institute of Technology Chapter received special tribute for winning the second place Remington Rand Award, two Hamilton Watch Awards in recognition of outstanding membership growth, a Newsletter Award of Merit, and a Special Activity Merit Award.

REMINGTON RAND AWARDS

Babson Institute Chapter finished the year in first place in the Remington Rand Performance Competition, followed by *Georgia Tech, American University, Boston University, Boston College, Loyola University (Chicago), Ohio University, Villa Madonna College, LaSalle College (Evening Division), Rider College* and *Sacramento State College.*

In addition, Citations were presented to the *University of Tennessee, University of Houston and University of Connecticut* chapters for their records of achievement. Commendation Citations were presented to *Alabama Polytechnic Institute, University of Pittsburgh, University of Wisconsin (Milwaukee),* and *University of Illinois,* for their accomplishments during the year in the Performance competition.

NEWSLETTER AWARDS

The Newsletter Award of Merit was presented to the following chapters: *Temple*

[illegible]oyola University of Chicago: (l-r) Henry Arends, [illegible]obert A. Kayer, Prof. Fischer, James T. Mul-[illegible]hey, Gerald F. O'Brien.

Ohio University: (l-r) William Meadors, Gerald Goodlive, Prof. Fischer, Richard Guild, Tom Cox.

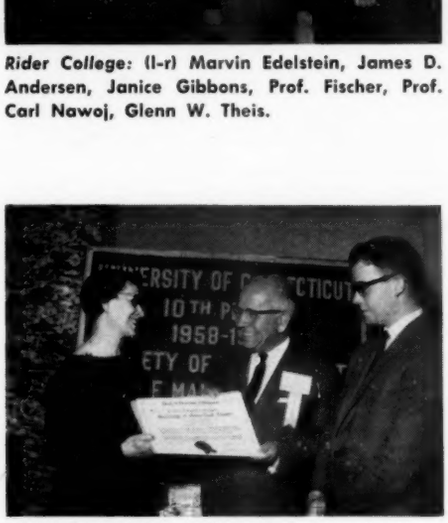
Villa Madonna College: (l-r) Jerry Hindman, David Perkins, Prof. Fischer, Thomas Wissel, David Lohre.

LaSalle College Evening Division: (l-r) Abe Kern, Larry Quinn, Bill Miller, Joseph Ziegler, Brother G. Paul, Prof. Joseph E. Crowley, Vincent A. Romano, Robert Gear, Chuck Mahon, Matthew Romano.

Rider College: (l-r) Marvin Edelstein, James D. Andersen, Janice Gibbons, Prof. Fischer, Prof. Carl Nawoj, Glenn W. Theis.

University of Tennessee: (l-r) Prof. Kyle Read, Frank Veal Jr., Prof. Fischer, Dave H. Nichols, Charles McCurry.

University of Houston: (l-r) Anthony Lamanna, Ben Goebel Jr., Prof. Fischer.



University of Connecticut: (l-r) Mrs. Laura S. Wignall, Prof. Fischer, Leroy Parks.

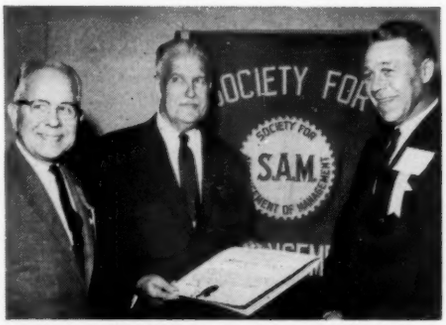
University of Wisconsin: (l-r) Prof. Fischer, Jack Togut.

University (Evening Division), Ohio University, University of Wisconsin (Milwaukee), Boston College and *Rider College.*

Special Activity Merit Awards were given to seven chapters in recognition of unique achievements for which adequate credit is not provided in the Performance Awards Plan. They are: *Boston University, University of Pittsburgh, Fenn College, Loyola University (Chicago), University of Bridgeport, American University and Georgia Tech.*

It was a great year—congratulations to all for a job very well done.

—PROFESSOR HAROLD FISCHER
VICE PRESIDENT, UNIVERSITY DIVISION



Remington Rand Performance Awards: Left to right are Prof. Fischer, Gen. Leslie R. Groves, and S.A.M. president Bibby.

Hamilton Awards: Robert F. Wilson, left, director of public relations for the Hamilton Watch Co., is thanked by S.A.M. president Bibby.

New York Chapter Promotion Award: Left to right are Prof. Fischer, N. Y. Chapter president George Murphy, and Prof. Julius Seidl of Fordham University.

Senior Chapters Cited for Promotion and Support of University Division

IN ADDITION to the above awards, several S.A.M. Senior Chapters received University Chapter Promotion and Coordination Awards.

These were given in recognition of the Senior Chapters' achievement in advancing the art and science of management through the successful promotion and support of University Chapters.

The following Senior Chapters received these awards:

Cleveland (three awards), *Philadelphia* (two awards), *Central New York, Fox Valley, New Haven, St. Louis* and *New York*. Presentation of the latter award is shown at left.

DO YOU REALLY KNOW HOW THE ALDEN SYSTEM CAN REVOLUTIONIZE YOUR PRODUCTION?

It will cut costs, increase profits and yield more production from less space . . . in your present plant. To "fuse your new plant to the future" . . . it's a Must! To be completely informed write for the new "ALDEN SYSTEMS HANDBOOK" . . . qualified people are invited to ask for the "ALDEN EXECUTIVE PORTFOLIO".

ALDEN SYSTEMS CO.
Alden Research Center
4 Washington St. • Westboro, Mass.

MANAGEMENT CONSULTANTS

HARRY M. KAISER
MANAGEMENT CONSULTING SERVICES

- Administrative Cost Reduction Programs
- Organization Simplification
- Systems—Procedures—Methods Improvement
- Measurement

2400 41st Street N.W.
Washington 7, D.C.

BRUCE PAYNE
AND **ASSOCIATES** INC.
MANAGEMENT CONSULTANTS

WESTPORT, CONN.
NEW YORK—BOSTON
ATLANTA—CHICAGO—MONTREAL
RIO DE JANEIRO—SAO PAULO
MEXICO CITY

ANNOUNCEMENT:

St. John's University

SCHOOL OF COMMERCE

Beginning Sept. 1960 will inaugurate a program for the degree of

MASTER OF BUSINESS ADMINISTRATION

offering advanced professional studies in business leadership to qualified men and women.

Choice of location and schedule:

Brooklyn Center – 96 Schermerhorn St. Evenings – 6 to 8:50 P.M.
University Campus – Jamaica. Saturdays – 8:45 A.M. to 2:45 P.M.

Open to qualified undergraduates and those holding B.A. & B.S. degrees.

Accounting:
C. P. A. Problems
Controllership
Advanced Federal Tax Accounting
S. E. C. Accounting
Analysis & Interpretation of Financial Statements
Manufacturing Cost
Distribution Cost
Internal Auditing
Accounting Systems: Design and Installation
State and Local Tax Accounting

Economics:
National Income & Income Determination
Price and Income Theory
Fiscal & Monetary Problems & Policies
Business Fluctuations and Forecasting
Business Statistics

Management:
Planning and Organizing the Enterprise
Control of Business Operations
Managerial Decision Making
Management of Information
The Human Problems of a Manager
Policy Development and Implementation
The Administrator in an Industrial Society

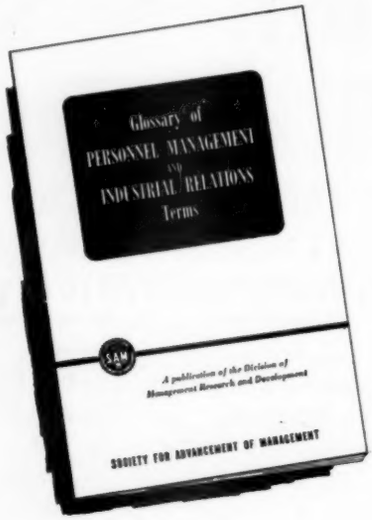
Advance inquiries and applications invited—Write or phone: Office of The Registrar, St. John's University, Grand Central & Utopia Pkways, Jamaica 32, N.Y., JAmaica 6-3700

S.A.M. Rating of Time Study Films

FOR SALE OR RENTAL

EIGHT REELS depicting 24 typical manufacturing and clerical operations alternately shown in five separate scenes. Composite time-values, based on the judgment of 1200 experienced time study men, afford comparison with the national average. For complete details, contact:

Research Division
SOCIETY FOR ADVANCEMENT OF MANAGEMENT
74 Fifth Avenue • New York 11, N. Y.



GLOSSARY OF PERSONNEL MANAGEMENT AND INDUSTRIAL RELATIONS TERMS

Authentic definitions of 300 key terms

based on five years of research in business practices and the consensus of business authorities, university specialists, and authors in the subject fields. Developed under the direction of the Research Project Committee:

JOHN F. MEE
Chairman; Professor and Chairman of Department of Management, Indiana University, Bloomington, Indiana.

FREDERICK G. ATKINSON
Vice President of Personnel and Industrial Relations, R. H. Macy and Company, New York, New York.

PALMER H. BEAM
Assistant Chief, Engineering Division, Veterans Administration Consolidated Center, Wadsworth Division, Wadsworth, Kansas.

ROBERT K. BURNS
Executive Officer, Industrial Relations Center, The University of Chicago, Chicago, Illinois.

VINCENT A. FLYNN
Research Director, Society for Advancement of Management, New York, New York.

MICHAEL J. JUCIUS
Professor of Business Organization, The Ohio State University, Columbus, Ohio.

RALPH C. MALICK
Supervising Industrial Engineer, Vulcanized Rubber and Plastics Company, Morrisville, Pennsylvania.

RONALD B. SHUMAN
Research Professor of Management, The University of Oklahoma, Norman, Oklahoma.

WILLIAM R. SPRIEGEL
Dean and Distinguished Professor of Management, The University of Texas, Austin, Texas.

JOSEPH W. TOWLE
Professor of Management, Washington University, St. Louis, Missouri.

JAMES C. WORTHY
Vice President, Sears, Roebuck and Company, Chicago, Illinois.

DALE YODER
Professor of Economics and Director of Industrial Relations Center, University of Minnesota, Minneapolis, Minnesota.

STAFF RESEARCH SUPERVISORS

ROCCO CARZO, Jr.
Assistant Professor of Management, Pennsylvania State College, University Park, Pennsylvania.

MANECK S. WADIA
Assistant Professor of Business Administration, Indiana University, Bloomington, Indiana.

Order from

SOCIETY FOR ADVANCEMENT OF MANAGEMENT

74 Fifth Avenue • New York 11, N. Y.

$2.00

9176